What is claimed is:

1. A package adapted to house an optoelectronic device, the package comprising:

a base having an upper surface, wherein the optoelectronic device is mounted to the upper surface;

a can structure comprising a lower cylindrical portion coaxially connected to an upper cylindrical portion by an annular wall, the lower cylindrical portion being connected to the base; and

the upper cylindrical portion accommodating one of an optical fiber stub or a GRIN lens.

2. The package of claim 1 wherein the base is made from a ceramic material and the can structure is metallic, the base further comprises a plurality of holes extending through the upper and lower surfaces of the base, each of the plurality of holes is filled with a conductive material for conducting welding current to connect the lower cylindrical portion of the can structure to the base.

3. The package of claim 2 further comprising a metal seal ring disposed between the upper surface of the base and the lower cylindrical structure of the can structure.

4. The package of claim 1 wherein the base and can structure are metallic and connected together by resistance or laser welding.

5. The package of claim 1 wherein the upper cylindrical portion of the can structure accommodates an angled fiber stub that is axially aligned with the optoelectronic device and the fiber stub terminates at an end surface that faces the optoelectronic device but which defines a plane disposed at an acute angle with respect to a radius that is perpendicular to an axis of the fiber stub.

6. The package of claim 5 wherein a minimum distance between the end surface of the fiber and the upper surface of the base ranges from about 50 to about 100 μm

7. The package of claim 1 wherein the upper cylindrical portion of the can structure accommodates a GRIN lens that faces the optoelectronic device but which defines a plane disposed at an acute angle with respect to a radius that is perpendicular to an axis of the optical fiber.

8. The package of claim 7 wherein a minimum distance between the GRIN lens and the upper surface of the base ranges from about 100 to about 1000 μm

9. The package of claim 7 further comprising a spacer ring disposed between the lower cylindrical portion of the can structure and the upper surface of the base.

10. The package of claim 9 wherein the optoelectronic device is sealed to the base by a metallic cover having a top wall with a window disposed therein.

11. The package of claim 10 wherein a minimum distance between the GRIN lens and the upper surface of the base ranges from about 1 to about 3 mm.

12. The package of claim 1 wherein the optoelectronic device is a photodiode.

13. The package of claim 1 wherein the optoelectronic device is a photodiode semiconductor chip.

14. The package of claim 1 wherein the optoelectronic device is a laser diode such as a VCSEL..

15. The package of claim 1 wherein the base further comprises a plurality of holes extending through the upper and lower surfaces of the insulating base, the lower surface of the base is connected to a plurality of leads, each of the plurality of holes is filled with a conductive material for connecting the optoelectronic device to one of the leads.

16. A method for hermetically packaging a photodiode chip to a base, the method comprising:

mounting the photodiode chip to an upper surface of the base;

attaching a can structure to the base, the can structure comprising a lower cylindrical portion coaxially connected to an upper cylindrical portion by an annular wall, the upper cylindrical portion accommodating one of an optical fiber stub or a grin lens; the lower cylindrical portion being hermetically sealed to the base and the upper cylindrical portion being axially aligned with the photodiode chip.

17. The method of claim 16 wherein the base is an insulating base and the method further comprises forming a first metal layer on the upper surface of the insulating base, wherein the attaching of the lower cylindrical portion of the can structure to the upper metallized surface of the insulating base is performed by resistance welding.

18. The method of claim 16 wherein the method further comprises:

attaching a metal sealing ring between the lower cylindrical portion of the can structure and the insulating base using an adhesive layer located between the metal sealing ring and the upper metallized surface of the insulating base.

19. The method of claim 18 wherein the base is an insulating base and the method further comprising:

forming a plurality of holes that extends through the upper and lower surfaces of the insulating base and metallizing upper and lower surfaces of the insulating base;

filling the plurality of holes with a conductive material; and

attaching to the lower cylindrical portion of the can structure to the upper surface of the insulating base, wherein the lower cylindrical portion of the can structure is in contact with each of the plurality of filled holes and the attaching of the lower cylindrical portion of the can structure to the upper metallized surface of the insulating base is performed by resistance welding.

20. The method of claim 19 wherein the method further comprises:

attaching a metal sealing ring between the lower cylindrical portion of the can structure and the insulating base using an adhesive layer located between the metal sealing ring and the upper metallized surface of the insulating base.

21. An automated process for manufacturing a package, wherein the package is adapted to house an optoelectronic assembly, the automated process comprising:

providing an insulating base having an upper surface and a lower surface, wherein the insulating base includes a plurality of vias formed through the upper and lower surfaces of the insulating base, and wherein the plurality of vias is filled with a conductive material;

forming a metallization layer on each of the upper and lower surfaces of the insulating base;

attaching a metal sealing ring to the upper metallized surface of the insulating base;

mounting the photodiode chip to the upper metallized surface of the insulating base and within an inner region of the metal sealing ring;

aligning a metal can structure over the photodiode chip, the can structure comprising a lower cylindrical portion coaxially connected to an upper cylindrical portion by an annular wall, the upper cylindrical portion accommodating one of an optical fiber stub or a grin lens; the aligning resulting in the upper cylindrical portion being axially aligned with the photodiode chip and the lower cylindrical portion being aligned with the metal sealing ring and vias; and

sealing the lower cylindrical portion to the insulating base to hermetically enclose the photodiode chip.

22. The automated process of claim 21 wherein sealing the lower cylindrical portion to the insulating base includes hermetically sealing a lower edge of the lower cylindrical portion to the metal sealing ring that is attached to the insulating base using one of a laser welding technique and a resistance welding technique.

23. A laser comprising:

a base formed of an electrically insulating material, wherein an laser diode chip and an electronic circuit electrically connected to the optical device are mounted to the base;

a sealing member formed of an electrically conducting material and attached to the base, wherein the sealing member extends along a perimeter of the base with the photodiode chip and the electronic circuit being located within an inner region of the sealing member; and

a can structure formed of the electrically conducting material, wherein the can structure is adapted to attach to the sealing member on the base to provide a hermetic enclosure for the laser diode chip and the electronic circuit, the can structure comprising the can structure comprising a lower cylindrical portion coaxially connected to an upper cylindrical portion by an annular wall, the upper cylindrical portion accommodating one of an optical fiber stub or a grin lens; the lower cylindrical portion being hermetically sealed to the base and the upper cylindrical portion being axially aligned with the photodiode chip.

24. The laser of claim 23 further including a plurality of holes formed through the insulating base, wherein each of the plurality of holes is filled with a conductive material, and wherein each of the plurality of holes is adapted to conduct welding current to connect the lower cylindrical portion of the can structure to the base.